



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,021	12/30/2003	Hao Bi	CS23442RL	8438
20280	7590	11/05/2007		
MOTOROLA INC 600 NORTH US HIGHWAY 45. W4 - 39Q LIBERTYVILLE, IL 60048-5343			EXAMINER DESIR, PIERRE LOUIS	
			ART UNIT 2617	PAPER NUMBER
			NOTIFICATION DATE 11/05/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DOCKETING.LIBERTYVILLE@MOTOROLA.COM
ADB035@Motorola.com

Office Action Summary	Application No.	Applicant(s)	
	10/749,021	BI ET AL.	
	Examiner	Art Unit	
	Pierre-Louis Desir	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-23, 25 and 27-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-23, 25 and 27-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 10/08/2007 have been fully considered but they are not persuasive.

Applicants argue that the examiner's assertion that the first and second layer content information is encrypted with different keys is erroneous since Khayrallah discusses error correction coding which is not the same as encryption.

Examiner respectfully disagrees. Khayrallah discloses that a temporal data stream 30 is divided into multiple segments 31, 32, and 33, each comprising some number $K_{sub.1}$, $K_{sub.2}$, $K_{sub.3}$ of information symbols, respectively (where $K_{sub.1}$, $K_{sub.2}$, $K_{sub.3}$ may or may not be equal). Each segment 31, 32, 33 is then encoded at blocks 41, 42, 43, respectively, utilizing a FEC code having the properties discussed above. The FEC code parameters at blocks 41, 42, 43 may be the same, but need not be (see figs. 3-4 and paragraph 28). Khayrallah also discloses that the FEC code 26 may be applied, along with other known coding techniques, such as interleaving, convolutional coding, and the like, as an inner code. One or more outer codes, such as parity, **encryption**, Error Correction Codes (ECC), or the like, may be applied to the FEC-encoded N transmission symbols 28, to further enhance the reliability of the wireless communication from RBS 16 to mobile terminals 18 (see figs. 3-4 and paragraph 22).

New claims have been added. Applicants are referred to the appropriate rejection as related to the newly added claims.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 27 is being presented with the limitation, "downlink channel." This limitation constitutes new matter.

Note: This rejection is also applied to any claim which depend on claim 27.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 20-23, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Khayrallah (previously disclosed), Pub. No. US 20030200499.

Regarding claim 20, Khayrallah discloses a method in wireless communications device, the method comprising: receiving a message identifying a channel on which content will be transmitted (i.e., the parameters of the selected traffic channel are sent to the mobile terminal 18 in a channel assignment message that is transmitted on the calling channel or on a temporary channel, which can both be referred to as a "call set-up channel." The mobile terminal 18 then leaves the call set-up channel and commences transmitting and receiving on the assigned traffic channel) (see paragraph 19); receiving first layer content information on a first channel (see figs. 3-4, abstract, paragraphs 28 and 33); receiving second layer content information on a second channel (see figs. 3-4, abstract, paragraph 28 and 33), at least one of the first and second channels identified in the message (see figs. 3-4, paragraphs 19, 28, and 33), the first and second layer content information is encrypted (i.e., Each segment 31, 32, 33 is then encoded at blocks 41, 42, 43, respectively, utilizing a FEC code) (see figs. 3-4, paragraphs 22, 28-33), decrypting the first layer content information with a first key and decrypting the second layer content information with a second key that is different than the first key (i.e., the mobile terminal decodes the received information---It should be noted that Khayrallah discloses that the FEC code parameters at blocks 41, 42, 43 may be the same, **but need not be**. Thus the information is encoded using different code parameters) (see figs. 3-4, paragraphs 22, 28-29, and 33-34).

Regarding claim 21, Khayrallah discloses a method (see claim 20 rejection) comprising combining the first and second layer content at the wireless subscriber device (see figs. 3-4, paragraphs 28-29, and 33).

Regarding claim 22, Khayrallah discloses a method (see claim 20 rejection) wherein the wireless communications device is a broadcast/multicast subscriber device (see fig. 2, paragraphs

Art Unit: 2617

10 and 12), receiving first layer content information includes receiving first layer broadcast/multicast content information (see fig. 3-4, abstract, paragraphs 28 and 33); receiving second layer content information includes receiving second layer broadcast/multicast content information (see fig. 3-4, abstract, paragraphs 28 and 33).

Regarding claim 23, Khayrallah discloses a method (see claim 20 rejection) receiving first layer content information on a first channel includes receiving the first layer content information on a first broadcast channel (see figs. 3-4, abstract, paragraph 28 and 33).

Regarding claim 25, Khayrallah discloses a method (see claim 20 rejection) wherein at least one of the first and second layer content information is encrypted (i.e., Each segment 31, 32, 33 is then encoded at blocks 41, 42, 43, respectively, utilizing a FEC code) (see figs. 3-4, paragraphs 22, 28 and 33), receiving at least one decryption key for the at least one decrypted first and second layer content information, decrypting the at least one decrypted first and second layer content information with the decryption key (i.e., the mobile terminal decodes the received information---It should be noted that Khayrallah discloses that the FEC code parameters at blocks 41, 42, 43 may be the same, **but need not be**. Thus the information is encoded using different code parameters) (see figs. 3-4, paragraphs 22, 28-29, and 33-34).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 27-30, 32, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trossen et al. (Trossen), Pub. No. US 20030157899 (previously disclosed) in view of Khayrallah.

Regarding claim 27, Trossen discloses a method in wireless communications network infrastructure entity, the method comprising: transmitting first layer broadcast/multicast service content information on a first channel ((see fig. 1, and paragraph 27); transmitting second layer broadcast/multicast service content information on a second channel (see fig. 1, and paragraph 27), the first and second channels are downlink channels, at least one of the first and second channels is a shared broadcast channel (i.e., wireless channel that supports a multicast service) (see fig. 1, and paragraph 24), the first layer broadcast/multicast service content information related to the second layer broadcast/multicast service content information (i.e., each subchannel transports a component of the multicast presentation) (see fig. 1, and paragraph 27).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising encrypting the first and second layer broadcast/multicast service content information using different encryption keys before transmitting.

However, Khayrallah discloses a method comprising encrypting the first and second layer broadcast/multicast service content information using different encryption keys before transmitting (i.e., a temporal data stream 30 is divided into multiple segments 31, 32, and 33, each comprising some number $K_{sub.1}$, $K_{sub.2}$, $K_{sub.3}$ of information symbols, respectively (where $K_{sub.1}$, $K_{sub.2}$, $K_{sub.3}$ may or may not be equal). Each segment 31, 32, 33 is then encoded at blocks 41, 42, 43, respectively, utilizing a FEC code having the properties discussed above. The FEC code parameters at blocks 41, 42, 43 may be the same, but need not be (see

figs. 3-4 and paragraph 28). Khayrallah also discloses that the FEC code 26 may be applied, along with other known coding techniques, such as interleaving, convolutional coding, and the like, as an inner code. One or more outer codes, such as parity, encryption, Error Correction Codes (ECC), or the like, may be applied to the FEC-encoded N transmission symbols 28, to further enhance the reliability of the wireless communication from RBS 16 to mobile terminals 18 (see figs. 3-4 and paragraph 22)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by the cited references to arrive at the claimed invention. A motivation for doing would have been to further enhance the reliability of the wireless communication from RBS to the mobile terminals.

Regarding claim 28, Trossen discloses a method (see claim 27 rejection) wherein transmitting a message identifying at least one of the first and second channels before transmitting the first and second broadcast/multicast service content information (i.e., link-level multicast addresses are assigned corresponding to appropriate groups of layers, and consequently node 207 signals the wireless terminals about the assigned link-level multicast addresses) (see page 4, and paragraph 45).

Regarding claim 29, Trossen discloses a method (see claim 27 rejection) comprising transmitting the first layer broadcast/multicast service content information and transmitting the second layer broadcast/multicast service content information substantially simultaneously (i.e., a performance, which includes audio component and video components are transmitted on different subchannels and received by wireless terminals, wherein the terminals can synchronize the layers that constitute the performance) (see fig. 1, paragraphs 24 and 27).

Regarding claim 30, Trossen discloses a method (see claim 27 rejection) wherein transmitting the first layer broadcast/multicast service content information and transmitting the second layer broadcast/multicast service content information with sufficient temporal proximity to enable substantially synchronized integration of the first and second layer broadcast/multicast service content information by a recipient (see fig. 1, paragraph 24).

Regarding claim 32, Trossen discloses a method (see claim 27 rejection) comprising transmitting third layer broadcast/multicast service content information on a second shared channel, the third layer broadcast/multicast service content information related to the first and second layer content information (see fig. 1, paragraphs 24 and 27).

Regarding claim 34, Trossen discloses a method (see claim 27 rejection) the first layer broadcast/multicast service content information is baseline broadcast/multicast service information transmitted on a shared broadcast channel (i.e., basic layer) (see paragraph 38); the second layer broadcast/multicast service content information is baseline broadcast/multicast service enhancement information transmitted on a second shared broadcast channel (i.e., enhancement layer) (see paragraph 38).

Regarding claim 35, Trossen discloses a method (see claim 27 rejection) wherein at least one of the first and second layers capable of being decoded (i.e., processed) and used without the other of the first and second layers (see paragraph 27).

Regarding claim 36, Trossen discloses a method in broadcast/multicast subscriber device, the method comprising: receiving first layer content information on a first channel (see paragraph 27); receiving second layer content information on a second channel (see paragraph

27), at least one of the first and second channels a shared broadcast channel (i.e., wireless channel that supports a multicast service) (see fig. 1, and paragraph 24).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising decrypting the first layer content information with a first key and decrypting the second layer content information with a second key that is different than the first key.

However Khayrallah discloses a method comprising decrypting the first layer content information with a first key and decrypting the second layer content information with a second key that is different than the first key (i.e., the mobile terminal decodes the received information--It should be noted that Khayrallah discloses that the FEC code parameters at blocks 41, 42, 43 may be the same, **but need not be**. Thus the information is encoded using different code parameters) (see figs. 3-4, paragraphs 22, 28-29, and 33-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by the cited references to arrive at the claimed invention. A motivation for doing would have been to further enhance the reliability of the wireless communication from RBS to the mobile terminals.

Regarding claim 37, Trossen discloses a method (see claim 36 rejection) comprising integrating the first and second layer content information at the wireless communications device (see paragraphs 24 and 27).

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trossen and Khayrallah further in view of Ranta-Aho et al. (Ranta-Aho), Pub. No. US 20040081125 (previously disclosed).

Trossen and Khayrallah a method as described above (see claim 27 rejection).

Although Trossen and Khayrallah a method as described above, Trossen and Khayrallah do not specifically disclose a method comprising transmitting the second layer broadcast/multicast service content information on a dedicated channel.

However, Ranta-Aho discloses a method wherein multicast messages are sent in the downlink shared channels (page 1, paragraph 22), and MBMS content is sent on the dedicated channel (see page 3, paragraph 58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Trossen and Khayrallah with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the proper transport of the content information.

9. Claims 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trossen and Khayrallah further in view of Hsu, Pub. No. US 20020141391 (previously disclosed).

Trossen and Khayrallah disclose a method as described above (see claim 27 rejection).

Although Trossen and Khayrallah disclose a method as described above, Trossen and Khayrallah do not specifically disclose a method comprising transmitting reliability information on a third channel, the reliability information for decoding at least one of the first and second layer broadcast/multicast service content information.

Art Unit: 2617

However, Hsu discloses a method wherein controlled access can be achieved by encrypting the transmission/content so that only the subscribed users can decrypt the content. This may use over-the-air encryption key exchange procedures (see paragraph 61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Trossen and Khayrallah with the characteristic as described by Hsu to arrive at the claimed invention. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is (571) 272-7799. The examiner can normally be reached on Monday-Friday 8:00AM- 5:30PM.

Art Unit: 2617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Pierre-Louis Desir
10/08/2007

JEAN GELIN
PRIMARY EXAMINER

